



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/534,411	05/11/2005	Michio Tsuyumoto	3273-0202PUS1	4477

2292 7590 12/11/2008  
BIRCH STEWART KOLASCH & BIRCH  
PO BOX 747  
FALLS CHURCH, VA 22040-0747

EXAMINER
----------

DESAI, ANISH P

ART UNIT	PAPER NUMBER
----------	--------------

1794

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/11/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/534,411	<b>Applicant(s)</b> TSUYUMOTO ET AL.	
	<b>Examiner</b> ANISH DESAI	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 September 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed on 09/26/08 after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/26/08 has been entered.
2. Claims 1-9 are pending. Claims 1-3 are withdrawn. Support for the newly amended claims 4 and 5 is found in the specification.
3. The 35 USC Section 112-second paragraph rejections are withdrawn in view of Applicant's amendment and response.
4. The 35 USC Section 102(a)/103(a) rejections based on Michio (JP 2003-313356-Machine translation provided by the Examiner) are withdrawn because the Michio reference has a publication date of November 6, 2003 which is after the effective US filing date for the present application (August 19, 2003).
5. The 35 USC Section 103(a) rejections based on Masayuki et al. (JP 2000-306568-Machine translation provided by the Examiner) are withdrawn, because Gurely permeability as taught by Masayuki is outside what is claimed by Applicant.
6. The 35 USC Section 102(b)/103(a) rejections based on Patel et al. (US 2001/0023014A1) are maintained.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Patel et al. (US 2001/0023014A1), substantially as set forth in 06/09/08 Office Action.

8. It is respectfully submitted that the ratio of  $A/B$ ,  $C/D$ ,  $A^1/A^2$ , and  $C^1/C^2$  as claimed by Applicant includes 1, which means that that a homogeneous porous film with respect to porosity and pore size is contemplated by the presently claimed invention. It is further noted that Applicant has acknowledged that the porous film of his/her invention has uniform micropores as a whole (see page 7 of 09/26/08 amendment).

9. Patel discloses a microporous film (abstract) containing microscopic pores and voids wherein the pores and voids normally connect with each other and with at least one surface of the film (a large number of continuous micropores) (abstract and 0002).

Art Unit: 1794

The microporous film of Patel includes polymer component such as that of Applicant's acrylic polymers (0073).

10. As set forth previously the ratio of  $A/B$ ,  $C/D$ ,  $A^1/A^2$ , and  $C^1/C^2$  as claimed by Applicant includes 1, which means that that a homogeneous porous film with respect to porosity and pore size is contemplated by the presently claimed invention. Patel discloses that "The microporous organic polymer film preferably has thickness in the range 5 to 100  $\mu\text{m}$ , most preferably about 20 to 80  $\mu\text{m}$ , and has a porosity in the range of 30 to 80% by volume, most preferably from 50 to 70% by volume. The average pore size is preferably in the range 0.2 to 2.0  $\mu\text{m}$ " (0072). Additionally, at paragraph 0031, Patel discloses following with regard to uniformity of pore size:

[0031] At the heart of the inventive method lies Applicants' discovery that polymers and copolymers of N-vinylpyrrolidone form microphasic dispersions with a wide range of host polymers when codissolved with them in a particular solvent system, then cast as films from the resulting solutions. Pores of controlled size and uniformity are then created by washing the films in aqueous media, which selectively extracts the N-vinylpyrrolidone polymers.

11. Further, at paragraph 0067, Patel recognizes the importance of control over the size and uniformity of the pores in the porous film of his/her invention.

12. The aforementioned disclosure of Patel is interpreted meets the claim requirement of ratio of  $A/B$ ,  $C/D$ ,  $A^1/A^2$ , and  $C^1/C^2$  of 1.

13. The difference between the claimed invention and the prior art of Patel is that Patel is silent as to teaching Gurley permeability as claimed in claims 5-9, however it is reasonable to presume that the Gurley permeability is present in the invention of Patel.

14. The support for said presumption is based on the fact that the porous films of Patel and that of Applicant as set forth above are structurally and compositionally similar. Thus, the presently claimed property of Gurley permeability would be present. The burden is shifted to Applicant to prove it otherwise (*In re Fitzgerald*, 205 USPQ 594). In addition, the presently claimed properties would obviously have been present once the invention of Patel is provided (see *In re Best*, 195 USPQ at 433, footnote 4 CCPA 1977).

15. As to the newly added product by process limitation "wherein the porous film is produced in a method comprising...Sa-Sb $\geq$ -10.", it is respectfully submitted that the product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985).

16. Once the Examiner provides a rationale tending to show that the claimed product appears to be the same or similar to that of the prior art, although produced by a different process, the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir.1983).

Art Unit: 1794

17. In the instantly claimed subject matter, Applicant's microporous film is contemplated to have homogeneous pore size and porosity, because ratios of  $A/B$ ,  $C/D$ ,  $A^1/A^2$ , and  $C^1/C^2$  as claimed by Applicant includes 1. Further, Applicant's microporous film requires thickness, pore size and porosity as claimed in claims 4 and 5. As set forth previously, the microporous film of Patel contains continuous micropores and it includes polymer such as that of contemplated by Applicant (i.e. acrylic polymer). Additionally, at paragraph 0031, Patel contemplates microporous film that has pores of controlled size and uniformity. Moreover, paragraph 0073 of Patel discloses "The microporous organic polymer film preferably has thickness in the range 5 to 100  $\mu\text{m}$ , most preferably about 20 to 80  $\mu\text{m}$ , and has a porosity in the range of 30 to 80% by volume, most preferably from 50 to 70% by volume. The average pore size is preferably in the range 0.2 to 2.0  $\mu\text{m}$ " (0072).

18. Thus, to the Examiner the Final structure and composition of the microporous films of Applicant and that of Patel are similar. Accordingly, Patel anticipates or strongly suggests the claimed invention.

### ***Response to Arguments***

19. Applicant's arguments filed 09/26/08 have been fully considered but they are not persuasive.

20. It is noted that Applicant has acknowledged that the porous film of his/her invention has uniform micropores as a whole (see page 7 of 09/26/08 amendment). Further, it is noted that throughout Applicant's arguments, Applicant asserts that since the prior art reference of Patel does not teach or suggest porous films made by the

Art Unit: 1794

process as required by Applicant in claimed invention, the porous film of Patel would not be uniform as a whole. Specifically, Applicant cites paragraphs 0090, 0041, 0021, and 0023 of Patel and asserts that the process disclosed in aforementioned paragraphs is not the same as Applicant's claimed process; therefore the porous film of Patel is not uniform as a whole and cannot have a Gurely permeability as claimed. Applicant argues that Patel does not teach an average surface pore size A; an average inside pore size B; an average rate of surface hole area (i.e. porosity) C; average rate of inside hole area (porosity) D; an average pore size A1 at one surface; an average pore size A2 at the other surface; an average rate of hole area C1 (porosity) at one surface; and average rate of hole area C2 (porosity) at the other surface. Therefore, Patel does not teach or suggest ratio A/B, C/D, A1/A2, and C1/C2 at all.

21. The Examiner respectfully disagrees for the following reasons:

22. It is noted that Applicant's porous film is uniform as a whole (i.e. film has uniform micropores as a whole) (see page 7 of 09/26/08 amendment). Further, Applicant's claimed invention contemplates ratio of 1 for A/B, C/D, A1/A2, and C1/C2. Thus, if a prior art discloses a uniform porous film in terms of the porosity and pore size; wherein the pore size and porosity are within the ranges which Applicant has claimed, then the prior art would necessarily have A/B, C/D, A1/A2, and C1/C2 (ratio being one) and Gurely permeability.

23. It is noted that Patel discloses "The pores and voids normally connect with each other and with at least one surface of the film." (see 0002). Additionally, Patel's invention contemplates uniform porous film as a whole. This is supported by Patel's



disclosure of obtaining pores of controlled size and uniformity at paragraph 0031 and at paragraph 0067 Patel recognizes the importance of controlling the pore size and uniformity. Moreover, Patel discloses that "The microporous organic polymer film preferably has thickness in the range 5 to 100  $\mu\text{m}$ , most preferably about 20 to 80  $\mu\text{m}$ , and has porosity in the range of 30 to 80% by volume, most preferably from 50 to 70% by volume. The average pore size is preferably in the range 0.2 to 2.0  $\mu\text{m}$ " (0072).

24. The aforementioned disclosure of Patel establishes that the porous film is uniform as a whole with respect to the pore size and porosity.

25. As to Applicant's arguments relating to the process of forming Patel's porous film and how that is different from Applicant's claimed process, the Examiner respectfully submits that said arguments are related to process limitations, and claims are directed to Final product. As previously noted above, the Examiner respectfully reminds Applicant that the product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "Even though product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Accordingly, the art rejections are sustained.

### ***Conclusion***

Art Unit: 1794

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4,970,034 to Ly et al., discloses isotropic microporous polysulfone membrane (see abstract).

27. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANISH DESAI whose telephone number is (571)272-6467. The examiner can normally be reached on Monday-Friday, 8:00AM-4:30PM.

28. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

29. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. D./  
Examiner, Art Unit 1794

/Hai Vo/  
Primary Examiner, Art Unit 1794